

REMARKS

Applicants have reviewed the present Application in light of the Office Action mailed November 7, 2001. Examiner rejected Claims 1-5, 8-11 and 13-15. Claims 6, 7 and 12 are objected to as dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants add new Claim 16. Thus, Claims 1-16 are pending in the Application. Applicants respectfully request reconsideration in light of the following remarks and allowance of all pending Claims.

Rejections under 35 U.S.C. §102

Claims 1-3, 4, 10 and 14 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,857,194 issued to Kelliher et al. ("*Kelliher*"). Applicants respectfully traverse these rejections for the reasons discussed below.

To anticipate a claim, each and every limitation must be found in a reference. In addition, "[t]he identical invention must be shown in as complete detail as is contained in the ... claims" and "[t]he elements must be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 USPQ 2d 1566 (Fed. Cir. 1990); MPEP § 2131 (*emphasis added*).

Independent Claim 1 is patentable over the cited art, because *Kelliher* does not disclose, teach or suggest each element of the claim. For example, Claim 1 includes the step of "identifying incidents of applications of the legacy computer system that output data." Examiner references the Abstract of *Kelliher* to support a legacy computer system that outputs data. However, no support is cited for identifying incidents of applications that output data. *Kelliher* does not disclose, teach or suggest these elements of Claim 1.

Claims 2-4 each depend from independent Claim 1. Therefore, Applicants respectfully submit that Claims 2-4 are patentable over the cited art, for example, for the same reasons discussed above with regard to Claim 1.

Independent Claim 10 is patentable over the cited art, because *Kelliher* does not disclose, teach or suggest each element of the claim. For example, Claim 10 includes a modeling engine "operable to analyze an application loaded on the legacy computer system to identify incidents within the application that output data from the legacy computer system." As discussed above with regard to Claim 1, *Kelliher* does not disclose, teach or suggest a modeling engine operable to identify incidents within an application loaded on a legacy computer system that output data.

Claim 14 depends from independent Claim 10. Therefore, Applicants respectfully submit that Claim 14 is patentable over the cited art, for example, for the same reasons discussed above with regard to Claim 10.

Rejections under 35 U.S.C. §103

Claims 5, 8-9, 11, 13 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Kelliher* in view of U.S. Patent No. 6,125,391 issued to Meltzer et al. ("Meltzer").

In order to establish a *prima facie* case of obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). The prior art as cited by Examiner does not teach each element of Claims 5, 8 or 9. Claims 5, 8 and 9 each depend from Claim 1. Examiner suggests that *Kelliher* discloses all elements of Claims 5, 8 and 9 that are included in Claim 1. However, as discussed above with regard to Claim 1, Applicant contends that *Kelliher* does not disclose, teach or suggest "identifying incidents of applications of the legacy computer system that output data." For at least these reasons, Applicants respectfully request that the rejections of Claims 5, 8 and 9 be withdrawn.

Furthermore, the prior art as cited by Examiner does not teach each element of Claims 11, 13 or 15. Claims 11, 13 and 15 each depend from Claim 10. Examiner suggests that

Kelliher discloses all elements of Claims 11, 13 and 15 that are included in Claim 10. However, as discussed above with regard to Claim 10, Applicant contends that *Kelliher* does not disclose, teach or suggest a modeling engine "operable to analyze an application loaded on the legacy computer system to identify incidents within the application that output data from the legacy computer system." For at least these reasons, Applicants respectfully request that the rejections of Claims 11, 13 and 15 be withdrawn.

Allowable Subject Matter

Applicants appreciate Examiner's indication that Claims 6, 7 and 12 would be allowable if rewritten in independent form, including all the elements of the base claim and any intervening claims. Applicants respectfully submit that Claims 6, 7 and 12 are allowable as depending from allowable Claims 1 and 10.

New Claim

Applicants add new Claim 16. New Claim 16 contains no new matter and is fully supported by the specification as filed.

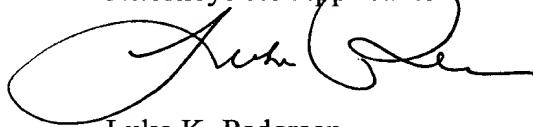
CONCLUSION

Applicants appreciate Examiner's careful review of the application. The Application has been reviewed in light of the Office Action mailed November 7, 2001. Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and full allowance of Claims 1-16.

No fee is believed to be due. However, the Commissioner is hereby authorized to charge any deficiency or credit any overpayments to Deposit Account No. 05-0765 of Electronic Data Systems Corporation.

Respectfully submitted,

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MARKED-UP VERSION AND NEW CLAIMS

1. A method for modeling a legacy computer system comprising:
identifying incidents of applications of the legacy computer system that output data;
and
defining a control flow graph of the output incidents.

2. The method of Claim 1 further comprising:
identifying the value or type of the data fields associated with each output incident;
and
attaching the value or type to the control flow graph.

3. The method of Claim 2 wherein identifying the value or type further comprises:
identifying output incidents of invariant data fields; and
attaching the value of each invariant data field to its associated control flow graph incident.

4. The method of Claim 2 wherein identifying the value or type further comprises:
identifying output incidents of variant data fields; and
attaching the type of each variant data field to its associated control flow graph incident.

5. The method of Claim 1 wherein the control flow graph comprises:
plural nodes having associated arcs, each node associated with an output incident.

6. The method of Claim 5 wherein a complete control flow graph of the application (N,A) is used to compute a directed graph (N_R, A_R) wherein:

n comprises a node in N_R if n, an element of N, starts an output process, stops an output process or outputs data; and

<n₁, n_m> comprises an arc in A_R if n₁ and n_m are in N_R and a sequence of arcs <n₁, n₂>, <n₂, n₃>, . . . , <n_{m-1}, n_m> is in A such that for i from 2 to m-1, n_i is not in N_R.

7. The method of Claim 6 further comprising:

defining the control flow graph as a formal grammar that describes the flow paths from each start command to the associated stop commands.

8. The method of Claim 1 further comprising:

associating the incidents with an Extensible Markup Language schema; and

creating a specification to modify the legacy computer system applications to provide output in Extensible Markup Language format.

9. The method of Claim 8 further comprising:

automatically modifying the legacy computer system applications in accordance with the specification.

10. A system for modeling an output application of a legacy computer system comprising:

a modeling engine interfaced with the legacy computer system, the modeling engine operable to analyze an application loaded on the legacy computer system to identify incidents within the application that output data from the legacy computer system; and

a control flow graph of the output operations within the applications.

11. The system of Claim 10 wherein the control flow graph comprises plural nodes, each node associated with an output incident.

12. The system of Claim 11 wherein a complete control flow graph of the application (N, A) is used to compute a directed graph (N_R, A_R) wherein:

n comprises a node in N_R if n , an element of N , starts an output process, stops an output process or outputs data; and

$\langle n_1, n_m \rangle$ comprises an arc in A_R if n_1 and n_m are in N_R and a sequence of arcs $\langle n_1, n_2 \rangle, \langle n_2, n_3 \rangle, \dots, \langle n_{m-1}, n_m \rangle$ is in A such that for i from 2 to $m-1$, n_i is not in N_R .

13. The system of claim 10 wherein the control flow graph of the output operations comprises as a formal grammar that describes the flow paths from each start command to the associated stop commands.

14. The system of Claim 10 further comprising a graphical user interface in communication with the modeling engine, the graphical user interface operable to display the control flow graph formal grammar and the incidents.

15. The system of Claim 14 wherein the graphical user interface further communicates with a mapping engine and an Extensible Markup Language schema, the mapping engine operable to map the incidents of the applications with the control flow graph formal grammar and the Extensible Markup Language schema.